

Fact Sheet



For Draft/Proposed Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-10700001-2010 (Part 4 of 14)**

Application Received: **December 2, 2009**

Plant Identification Number: **10700001**

Permittee: **E. I. du Pont de Nemours & Co.**

Facility Name: **Washington Works**

Business Unit: **Polyvinyl Butyral Production**

Mailing Address: **P. O. Box 1217, Washington, WV 26181-1217**

Physical Location:	Washington, Wood County, West Virginia
UTM Coordinates:	442.368 km Easting • 4,346.679 km Northing • Zone 17
Directions:	From I-77, take the Route 50 bypass around Parkersburg towards Ohio. Take the last exit prior to the bridge exit from the Route 50 Bypass onto DuPont Road. At the light turn left onto DuPont road. The facility is on the right approximately ½ mile from the turn.

Facility Description

In the Polyvinyl Butyral Production Unit (Part 4 of 14), polyvinyl butyral (PVB) resin particles and sheeting are manufactured for use in automotive and architectural laminated glass applications. The Polyvinyl Butyral Production Unit has the capability to operate 8,760 hours per year.

Butyraldehyde, one of the two main raw materials, is received by tank car and stored in tanks. The other major raw material, polyvinyl alcohol (PVA) is received by hopper cars and stored in silos. The PVA is then weighed, dissolved in water, and placed in a holdup tank. Butyraldehyde and PVA are fed to reactors where they form polyvinyl butyral (PVB). The polyvinyl butyral, in an aqueous slurry form, is then transferred to either the flake drying or extrusion areas. The PVB that is sent to the flake drying area is dewatered, dried, and then stored in a silo before being loaded for shipment off-site.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2008 Actual Emissions
Carbon Monoxide (CO)	0.1	0.01
Nitrogen Oxides (NO _x)	0	0
Particulate Matter (PM _{2.5})	0	0
Particulate Matter (PM ₁₀)	0	0
Total Particulate Matter (TSP)	9.71	4.08
Sulfur Dioxide (SO ₂)	0	0
Volatile Organic Compounds (VOC)	37.3	9.00
<i>PM₁₀ is a component of TSP.</i>		
Hazardous Air Pollutants	Potential Emissions	2008 Actual Emissions
Methanol	9.53	0.80
Ethylene Glycol	0.261	0

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

Due to the facility-wide potential to emit over 100 tons per year of criteria pollutants, over 10 tons per year of an individual HAP, and over 25 tons per year aggregate HAPs, DuPont Washington Works is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR6	Open burning prohibited.
	45CSR7	Particulate matter and opacity limits for manufacturing sources.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Preconstruction permits for minor sources.
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR§21-30	Solvent Metal Cleaning.
	45CSR30	Operating permit requirement.
	45CSR34	Emission Standards for Hazardous Air Pollutants.
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. 63, Subpart FFFF	Miscellaneous organic chemical manufacturing (MON) MACT.
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances

State Only:	45CSR4 45CSR§21-40	No objectionable odors. Control of VOC emissions
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Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-1230	April 23, 1990	NA
R13-2380D	March 27, 2009	NA
R13-2617C	July 13, 2007	NA

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

Title V Administrative Amendments/Minor Modifications/R13 Changes/Other Changes

The initial Title V Permit for R30-10700001-2003 (Part 4 of 14) was issued on June 2, 2005. Since then, the Title V permit has been modified as follows:

- 1) **R30-10700001-2003 (Part 4 of 14) - AA01 issued on December 4, 2006.** This administrative amendment updated the 40 C.F.R. 63, Subpart FFFF compliance date from November 10, 2006 to May 10, 2008 due to rule changes and also added language to clarify the significant modification timeline for incorporating the Subpart FFFF requirements.
- 2) **R30-10700001-2003 (Part 4 of 14) – MM01 issued on June 7, 2007.** This minor modification permit incorporated requirements from R13-2617B. R13-2617B, issued on September 29, 2006, was a site-wide permit which included the site-wide applicable requirements of 45CSR§21-40 and 45CSR27 and superseded and replaced Consent Orders CO-R21-97-47 and CO-R27-92-19.
- 3) **R30-10700001-2003 (Part 4 of 14) – MM02 issued on June 16, 2009.** This minor modification removed all of the requirements of Section 6.0. The group of equipment in the Polyvinyl Butyral Business Unit to which Section 6.0 applied was permanently shutdown.

- 4) **R30-10700001-2003 (Part 4 of 14) – SM01 issued on June 16, 2009.** This significant modification incorporated requirements from R13-2380D which was issued on March 27, 2009. The changes approved under R13-2380D were as follows: 1) the applicable requirements of 40 C.F.R. 63, Subpart FFFF (the MON MACT) were added; 2) existing equipment that pre-dated the permitting program was added; and 3) the extruder section of the permit was removed.
- 5) **Miscellaneous changes to the Section 1.1 Emission Units Table.** The following equipment was included in the Emission Units Table in the initial Title V permit, but is no longer in service and was not included in the Section 1.1 Emission Units Table in the Title V permit renewal: B10A, B12A, B12B-1, B12B-2, B12C, B12E, B19, B27A, B27B, B27C, B27D-1, B27D-2, B27D-3, B27D-4, B27D-5, B27E, B28A, B29A, B29B, B29C, B40B, B41, B51, and B60D.

B26-1, B26-2, B26-3, B26-4, B26-5, B26-6, B26-7, B26-8, B26-9, B26-10, and B26-11 have been grouped and listed as either B26A or B26B in the Section 1.1 Emission Units Table of the Title V renewal permit.

- 6) **Combined requirements from Sections 4 and 5 into one section, removed Section 6, and renumbered Section 7.** The requirements from Sections 4 and 5 in the initial Title V Permit were combined into one section, Section 4. In the initial Title V permit, Section 4 contained only requirements from R13-2380C and Section 5 contained requirements from R13-1230 and 45CSR7. Since R13-2380D now addresses 45CSR7 requirements and many of these 45CSR7 requirements are shared with equipment covered under R13-1230, it seemed logical to combine these two sections. Section 7 from the initial Title V permit was renumbered as Section 5. Section 6 was removed as explained in item number 3 above.

The conditions from Section 5 in the initial Title V permit were included in the Title V renewal as follows:

Initial Title V Permit Condition Number	Title V Renewal Permit Condition Number
5.1.1	4.1.21
5.1.2	4.1.8
5.1.3	Emission point B32A is in 4.1.22; all other emission points are streamlined with 4.1.1.
5.1.4	4.1.9
5.1.5	4.1.23
5.1.6	4.1.24
5.1.7	4.1.10
5.2.1	Added to the 4.2.1 (R13-2380D, condition 4.2.1) visible emission observation requirements through 45CSR§30-5.1.c.
5.2.2	
5.3.1	4.3.1
5.3.2	4.3.2
5.4.1	Added to the 4.4.3 (R13-2380D, condition 4.4.6) recordkeeping requirements through 45CSR§30-5.1.c.
5.4.2	
5.4.3	4.4.12
5.4.4	4.4.13
5.4.5	This requirement was no longer needed because sufficient monitoring and recordkeeping of emissions from the unloading system are now provided under 4.2.2 and 4.4.8.

- 7) **Included changes resulting from the issuance of R13-2617C.** R13-2617C was issued on July 13, 2007 and updated the Attachment A listing of 45CSR21 and 45CSR27 sources.

- 8) **Removed Conditions 3.1.10 and 3.1.11 from the initial Title V permit.** Conditions 3.1.10 and 3.1.11 contained placeholder language for 40 C.F.R. 63, Subpart FFFF. Since the specific requirements of 40 C.F.R. 63, Subpart FFFF were added to the initial Title V permit as part of R30-10700001-2003 (Part 4 of 14) – SM01, the placeholder language was no longer applicable and was removed as part of the Title V renewal permit.

40 C.F.R. 64 - Compliance Assurance Monitoring (CAM)

According to 40 C.F.R. §64.2(a), CAM applies to a pollutant-specific emissions unit at a major source that is required to obtain a part 70 or 71 permit if the unit satisfies all of the following criteria: 1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under 40 C.F.R. §64.2(b)(1); 2) The unit uses a control device to achieve compliance with any such emission limitation or standard; and 3) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. 40 C.F.R. §64.2(b)(1)(vi) exempts emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method and 40 C.F.R. §64.2(b)(1)(i) exempts emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 112 of the Act.

Reactor Systems B08A and B08B have emission limitations and standards for VOC and methanol and use packed bed scrubbers B08A and B08B to achieve compliance with these emission limitations and standards. The reactor systems are subject to emission limitations for methanol under 40 C.F.R. 63, Subpart FFFF; and the packed bed scrubbers which are used to demonstrate compliance with these emission limitations are subject to the control device requirements under 40 C.F.R. 63, Subpart FFFF. Also, the packed bed scrubbers B08A and B08B had a continuous compliance determination method specified in the initial Title V permit. Since the packed bed scrubbers B08A and B08B are subject to the requirements of 40 C.F.R. 63, Subpart FFFF and had continuous compliance determination methods specified in the initial Title V permit, they are not subject to the additional monitoring requirements of CAM, as specified under 40 C.F.R. §§64.2(b)(1)(i) and (b)(1)(vi).

Particulate matter emissions from the B30 Drying System are controlled by the B30 Baghouse. The B30 Drying System is subject to particulate matter emission limits under R13-1230 and 45CSR7; and the B30 Baghouse is used to achieve compliance with these emission limits. However, since the pre-control device emissions of particulate matter from the B30 Drying System are less than 100 tons per year, the B30 Baghouse is not subject to the CAM requirements under 40 C.F.R. 64.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

- a. 40 C.F.R. 60, Subpart K - “Standards of Performance For Storage Vessels For Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978.” There are no petroleum liquid storage tanks in the Polyvinyl Butyral Production Area.
- b. 40 C.F.R. 60, Subpart Ka - “Standards of Performance for Storage Vessels For Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984.” There are no petroleum liquid storage tanks in the Polyvinyl Butyral Production Area.
- c. 40 C.F.R. 60, Subpart Kb - “Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.” There are no volatile organic liquid storage tanks in the Polyvinyl Butyral Production Area constructed after July 23, 1984 with a design capacity equal to or greater than 75 cubic meters (m³).

- d. 40 C.F.R. 60, Subpart VV - “Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.” The Polyvinyl Butyral Production Area does not produce as intermediates or final products any of the materials listed in 40 C.F.R. §60.489.
- e. 40 C.F.R. 60, Subpart DDD - “Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry.” The Polyvinyl Butyral Production Area does not manufacture polypropylene, polyethylene, polystyrene, or poly (ethylene terephthalate) for which this rule applies.
- f. 40 C.F.R. 60, Subpart HHH – “Standards of Performance for Synthetic Fiber Production Facilities.” The Polyvinyl Butyral Production Area does not operate a solvent-spun synthetic fiber process as defined by 40 C.F.R. §60.601.
- g. 40 C.F.R. 60, Subpart RRR - “Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes.” The Polyvinyl Butyral Production Area utilizes batch processes which in accordance with 40 C.F.R. §60.700(c)(1) are not subject to this regulation.
- h. 40 C.F.R. 61, Subpart V - “National Emission Standards for Equipment Leaks (Fugitive Emissions Sources).” Applies to sources in VHAP service as defined in 40 C.F.R. §61.241. VHAP service involves chemicals that are not used in a manner that qualifies them under the rule in the Polyvinyl Butyral Production Area.
- i. 40 C.F.R. 63, Subpart H - “National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.” 40 C.F.R. 63 Subparts F, G, and H do not apply to manufacturing process units that do not meet the criteria in 40 C.F.R. §§63.100(b)(1), (b)(2), and (b)(3).
- j. 40 C.F.R. 63, Subpart KK – “National Emission Standards for the Printing and Publishing Industry.” The Polyvinyl Butyral Production Area was subject to the requirements of 40 C.F.R. 63, Subpart KK, but has ceased operations of the facilities that were covered under this MACT standard.
- k. 40 C.F.R. 63, Subpart JJJ - “National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins.” The Polyvinyl Butyral Production Area does not produce the materials listed in 40 C.F.R. §63.1310.
- l. 40 C.F.R. 63, Subpart MMMM - “National Emission Standards for Hazardous Air Pollutants: Surface Coating of Miscellaneous Metal Parts and Products.” The Polyvinyl Butyral Production Area is not a miscellaneous metal parts and products surface coating facility, as defined by 40 C.F.R. §63.3881, and therefore is not subject to this rule.
- m. 40 C.F.R. 63, Subpart OOOO – “National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles.” The Polyvinyl Butyral Production Area does not have an operation for printing, coating, slashing, dyeing or finishing of fabric and other textiles as defined in 40 C.F.R. §63.4281.
- n. 40 C.F.R. 63, Subpart PPPP – “National Emission Standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products.” The Polyvinyl Butyral Production Area does not produce an intermediate or final product that meets the definition of “surface coated” plastic part.
- o. 40 C.F.R. 63, Subpart WWWW - “National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production.” The Polyvinyl Butyral Production Area does not engage in reinforced plastics composites production as defined in 40 C.F.R. §63.5785 and does not manufacture composite material as defined in 40 C.F.R. §63.5935.

- p. 40 C.F.R. 63, Subpart HHHHH – “National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing.” The Polyvinyl Butyral Production Area does not produce, blend, or manufacture coatings as part of the manufacturing process.
- q. 40 C.F.R. 82, Subpart B - “Protection of Stratospheric Ozone.” Requires recycling of Chlorofluorocarbons (CFCs) from motor vehicles and that technicians servicing equipment need to be licensed. The Polyvinyl Butyral Production Area does not conduct motor vehicle maintenance involving CFCs on site.
- r. 40 C.F.R. 82, Subpart C – “Protection of Stratospheric Ozone.” Bans non-essential products containing Class I substances and bans non-essential products containing or manufactured with Class II substances. The Polyvinyl Butyral Production Area does not use, manufacture, nor distribute these materials.
- s. 45CSR2 – “To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers.” The Polyvinyl Butyral Production Area does not contain any fuel burning units regulated under this rule.
- t. 45CSR§6-4 – “To Prevent and Control Air Pollution from Combustion of Refuse: Emission Standards for Incinerators and Incineration.” The Polyvinyl Butyral Production Area does not operate any incinerators as defined by 45CSR§6-2.8.
- u. 45CSR10 – “To Prevent and Control Air Pollution from the Emission of Sulfur Oxides.” The Polyvinyl Butyral Production Area does not have emission sources of sulfur oxides subject to this rule.
- v. 45CSR16 – “Standards of Performance for New Stationary Sources Pursuant to 40 C.F.R. 60.” The Polyvinyl Butyral Production Area is not subject to any requirements under 40 C.F.R. 60.
- w. 45CSR17 – “To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter.” Per 45CSR§17-6.1, the Polyvinyl Butyral Production Area is not subject to 45CSR17 because it is subject to the fugitive particulate matter emission requirements of 45CSR7.
- x. 45CSR27 – “To Prevent and Control the Emission of Toxic Air Pollutants.” The Polyvinyl Butyral Production Area does not have emission sources of toxic air pollutants as listed in 45CSR27.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: March 2, 2010
Ending Date: April 1, 2010

All written comments should be addressed to the following individual and office:

Carrie McCumbers
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Carrie McCumbers
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1226 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

Not applicable.